

Claims

1. A closing system for a natural or an artificial anus, characterized by an inflatable balloon having an approximately toroidal structure, formed of a hose segment with a two-dimensional surface, which hose is inverted into itself, whereby its two ends (13, 14) extend roughly coaxially with each other and are (each) connected to a respective sleeve.
2. The closing system as recited in one of the preceding claims, characterized in that said balloon (12) is preformed with two connection ports (13, 14) or ends.
3. The closing system as recited in claim 1 or 2, characterized in that said connection ports (13, 14) or ends of said balloon (12) are preformed such that each or both of the end regions (13, 14) of the inverted hose segment have a roughly constant cross section, i.e., one having a constant cross-sectional length.
4. The closing system as recited in one of the preceding claims, characterized in that said connection ports (13, 14) or ends of said balloon (12) are preformed such that cross sections through the two ends of the inverted hose have different lengths that correspond to the different circumferential lengths of said regions.
5. The closing system as recited in one of the preceding claims, characterized in that the inverted hose is preformed such that its front end, which is distal relative to the mutually coaxially ends, assumes in the inflated state a gently curved contour with no edge regions.
6. The closing system as recited in one of the preceding claims, characterized in that said balloon is preformed such that it has in the inflated state a diameter D that exceeds the diameter d of the bowel segment.
7. The closing system as recited in claim 6, characterized in that the length of the sleeve(s) is in each case smaller than the length of the balloon measured coaxially to the axis of symmetry of the inflated balloon, preferably smaller than half the length of the balloon, particularly smaller than one-third the length of the balloon.

8. The closing system as recited in one of the preceding claims, characterized in that the collapsed balloon (12) is housed in a cavity (11), which is provided in a plug (2) and is directed toward the interior of the bowel.

9. The closing system as recited in claim 8, characterized in that two connection ports (13, 14) of said balloon (12) are each connected by their mouths to said plug (2).

10. The closing system as recited in either of claims 8 or 9, characterized in that said plug (2) is composed of two sleeves (3, 4) that can be fitted one inside the other and in that the mouth (15, 16) of each connection port (13, 14) is connected to a respective one of said sleeves (3, 4).

11. The closing system as recited in one of claims 8 to 10, characterized in that the mouth (15) that can be connected to the outer sleeve (3) has a diameter adapted to said outer sleeve (3), and the mouth (16) that can be connected to the inner sleeve (4) has a diameter adapted to said inner sleeve (4).

12. The closing system as recited in one of the preceding claims, characterized in that said balloon (12) can be pulled through a sleeve, preferably said outer sleeve (3).

13. The closing system as recited in one of the preceding claims, characterized in that a sleeve, particularly said inner sleeve (4), comprises an air channel (17).

14. The closing system as recited in claim 13, characterized in that said air channel (17) comprises a stop valve (19).

15. The closing system as recited in one of the preceding claims, characterized in that a filter, particularly a carbon filter (21) is or can be disposed inside a sleeve, preferably said inner sleeve (4).

16. The closing system as recited in one of the preceding claims, characterized in that said plug (2) and/or one or more sleeves is/are connectable to a sealing cap (10).

17. The closing system as recited in claim 16, characterized in that said sealing cap (10) is connected in adjacent contact to said plug (2).
18. The closing system as recited in claim 16 or 17, characterized in that said sealing cap has a folded structure.
19. The closing system as recited in one of claims 16 to 18, characterized in that said sealing cap (10) and/or said plug (2) is connectable to a collection bag (23).
20. The closing system as recited in one of the preceding claims 16 to 19, characterized in that the collection receptacle (23) is connectable to said sealing cap (10) and to said inner sleeve (4).
21. The closing system as recited in one of the preceding claims, characterized in that said balloon is made of a thin-walled polymer.
22. The closing system as recited in claim 21, characterized in that said polymer is a polyurethane, a polyurethane/polyvinyl chloride blend or a comparable polyurethane-based material.
23. The closing system as recited in one of the preceding claims, characterized in that a ring-shaped element is fixed in the central lumen of the hose segment inverted into itself, said fixing preferably being effected only along a narrow, circumferentially surrounding line so as not to deteriorate the freedom of movement of the balloon.
24. The closing system as recited in one of the preceding claims, characterized by an externally controllable sealing element, particularly in the form of a separately inflatable balloon, disposed in the central lumen of the hose segment inverted into itself or, as applicable, a hose region adjoining thereto.
25. The closing system as recited in one of the preceding claims, characterized in that a tube, catheter or the like can be inserted through the central lumen of the hose segment inverted into itself.